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DEC 11 2006

Atty Dkt. No.: 10021296-1
USSN: 10/633,609

REMARKS

In view of the following remarks, the Examiner is requested to allow claims 1-13, 17-19, 34, 49, 50, 56, 57 and 59-65, the only claims pending and under examination in this application.

Claims 1, 5, 6 and 59 have been amended to clarify the claim language. Specifically, Claim 1 has been amended to indicate that the method includes the steps of exposing the array to a sample and reading a sub-array. Support for these amendments can be found throughout the specification and claims as originally filed, particularly at page 25, line 5 to page 27, line 2. Additionally, Claims 1 and 59 have been amended to clarify what is meant by the term "pattern." Support for these amendments can be found at page 2, lines 2 to 10 and page 9, lines 4 to 12. Claims 54 and 55 have been cancelled. New Claims 64 and 65 have been added. Support for new Claims 64 and 65 may be found at page 11, lines 10-12 and page 12, lines 11-13, respectively. Accordingly, no new matter has been added.

As no new matter has been added by way of these amendments, entry thereof by the Office is respectfully requested.

Interview Summary

The Examiner is thanked for the telephonic interview conducted on December 5, 2006. During the interview the remaining rejections were discussed. The Examiner agreed to withdraw the 35 U.S.C. § 112, second paragraph, rejections in view of the above amendments and the remarks set forth below. Additionally, the Examiner suggested that the Applicants amend the claims to clarify what is meant by a "pattern".

Claim Rejections - 35 U.S.C. § 112, second paragraph

Claims 1-13, 17-19, 34, 56, 57 and 62 have been rejected under 35 U.S.C. 112, second paragraph, as allegedly being indefinite for failing to particularly point

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out and distinctly claim the subject matter which the Applicants regard as the invention.

Claims 1-13, 17-19, 34, 56 and 57 have been rejected for allegedly omitting an essential step. The Applicants respectfully disagree. However, in order to expedite prosecution and advance the case to issuance the Applicants have amended Claims 1 and 6, the independent base claims from which the other claims ultimately depend. The amendment of Claims 1 and 6 should not be construed as acquiescence to any position of the Office. However, in view of the amendments to Claims 1 and 6 the 35 U.S.C. 112, second paragraph, rejection of Claims 1-13, 17-19, 34, 56 and 57 may be withdrawn.

Claim 62 has been rejected because the phrase "remote location" is allegedly indefinite. The Office asserts that it is unclear if the process of Claim 61 is performed in a different building than where the array identifier and test request originate.

The Applicants respectfully disagree. The Applicants' specification indicates that the disclosed methods may include retrieving a pattern from a memory using an array identifier and test request, wherein the array identifier and test request may be received from a remote location, such as an array user station or reader station, and the retrieved pattern may then be communicated to the remote location in response to the received array identifier and test request. See page 13, line 29 to page 14, line 5.

Accordingly, in view of the teachings of the specification the Applicants contend that one of skill in the art would understand what is meant by the claim language. Therefore, the Applicants respectfully request that the 35 U.S.C. 112, second paragraph, rejection of Claim 62 be withdrawn.

Claim Rejections - 35 U.S.C. § 102

Atty Dkt. No.: 10021296-1
USSN: 10/633,609

Claims 1-13, 34, 49, 50, 56, 57 and 59-63 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Jain, et al. (Genome Research (2006) 12:325-332).

According to the MPEP, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. See MPEP 2131.

Claim 1 has been amended. Elements of Claim 1, and the claims dependant thereon, are receiving a request for a test which uses a sub-array of a chemical array, retrieving a pattern of locations of features that make up the sub-array from a memory using the test request, exposing the array to a sample and reading the sub-array.

Claim 59 has been amended. An element of Claim 59, and the claims dependant thereon, is retrieving a sub-array pattern of a chemical array from a memory wherein the sub-array pattern comprises a plurality of locations of features that make up said sub-array.

The Office asserts that Jain anticipates the claims because Jain discloses an algorithm for accurately quantifying microarray image data. See below.

Algorithm

There are five steps in the process of deriving ratios from the input images: (1) estimating the spot spacing and the sub-array spacing, (2) locating and optimizing the position of the subarray grids, (3) locating and optimizing the position of individual spots, (4) identifying foreground and local background pixels for each spot, and (5) computing ratios and statistical quality measures.

As can be seen with reference to the above insert, the algorithm requires the input of the geometry of sub-array grids and of spots in each sub-array. Using this information and the input data image, the signal intensities of the spots are summed and spot spacing and sub-array spacing are estimated. This information is then

Atty Dkt. No.: 10021296-1
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used to segment the sub-arrays and correctly identify spot locations. See pages 326 and 327. Specifically, Jain is directed to identifying the precise pixels in a printed spot. See page 325.

The Applicants, however, contend that Jain does not anticipate the rejected claims. To the extent that Jain references a sub-array it is for the purpose of summing the intensities of the various spots of the sub-array so as to estimate spot spacing and thereby accurately identify the pixels in a spot. Hence, although the algorithm disclosed in Jain may be used to identify the precise pixels in a printed spot, the disclosed methods simply do not include the steps of receiving a pattern of locations of features that make up a sub-array from a memory in response to a request and reading the identified sub-array. Specifically, Jain does not teach the receipt and reading of a pattern of locations of features of a sub-array.

Accordingly, the Applicants contend that Jain does not anticipate the rejected claims because Jain fails to teach every element of the claims as amended. Namely, Jain fails to teach receiving a pattern of locations of features that make up a sub-array from a memory in response to a request and reading the identified sub-array. Therefore, the Applicants respectfully request that the 35 U.S.C. § 102(b) rejection of Claims 1-13, 34, 49, 50, 56, 57 and 59-63 be withdrawn.

Claim Rejections - 35 U.S.C. § 103

Claims 17-19 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Jain, et al. (Genome Research (2006) 12:325-332) in view of Podyminogin et al., (Nucleic Acids Research (2001) 29(24):5090-5098).

According to the MPEP § 706.02 (j), to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success.

Atty Dkt. No.: 10021296-1
USSN: 10/633,609

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

Claims 17-19 depend from Claim 1. As set forth above, elements of Claim 1 include reading a request for a test, which uses a sub-array of an array, retrieving a pattern of the sub-array from a memory using the test request, and exposing the identified sub-array to a sample.

The Applicants contend that a *prima facie* case of obviousness has not been established because the recited combination fails to teach or suggest all the elements of the rejected claims.

Specifically, Jain is deficient because Jain fails to teach or suggest receiving a pattern of locations of features that make up a sub-array from a memory in response to a request and reading the identified sub-array. Jain does not teach or suggest this element because Jain does not teach receiving a stored sub-array pattern of locations of features that make up the sub-array, based upon a test request, or reading the sub-array. As Podymyinogin was cited solely for its disclosure that a "lack of binding may be caused by cross-linking or cleavage," it fails to remedy the deficiencies of Jain.

Therefore, in view of the above, a *prima facie* case of obviousness has not been established because the recited combination fails to teach every element of the rejected claims, namely reading a request for a test and retrieving a pattern of a sub-array from a memory using the test request. Therefore, the Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claims 17-19 be withdrawn.

New Claims

New Claim 64 depends from Claim 1. New Claim 65 depends from Claim 59. Accordingly, for the reasons stated herein above, new Claims 64 and 65 are patentable.

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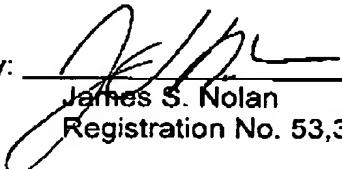
CONCLUSION

Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone John Brady at (408) 553-3584.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10021296-1.

Respectfully submitted,

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